DOCUMENT RESUME

ED 379 874 EC 303 747

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TITLE Music Therapy in the Rehabilitation of Head-Injured Clients.
PUB DATE 95
NOTE 29p.
PUB TYPE Information Analyses (070) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Cognitive Ability; Elementary Secondary Education; Evaluation Methods; *Head Injuries; Interdisciplinary Approach; Intervention; Measures (Individuals); *Music Therapy; *Neurological Impairments; Neuropsychology; *Rehabilitation
IDENTIFIERS *Rancho Los Amigos Scale of Cognitive Functioning

ABSTRACT

This paper summarizes research on clinical applications of music therapy with closed head injury clients. It offers a rationale for including music therapy in interdisciplinary rehabilitation. The Rancho Los Amigos Levels of Cognitive Functioning are outlined, and therapeutic assessment and treatment procedures are discussed. Rehabilitation information and procedures are provided in the following areas: awareness and orientation; motor, sensory, cognitive, emotional, behavioral, and social rehabilitation; communication; and family considerations. The implications of substance abuse and post-traumatic epilepsy with the head-injured individual are also reviewed. The paper finds that music therapy has been shown to have a viable role in neuropsychological rehabilitation. The paper concludes with the hope that interdisciplinary teams will become more aggressive in including music therapists as part of the team, and the team as a whole will work to provide the best possible rehabilitation approach. An appendix summarizes the eight levels of the Rancho Los Amigos Scale of Cognitive Functioning. (Contains 22 references.) (JDD)

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ED 379 874

Music Therapy in the Rehabilitation of Head-Injured Clients

Lissa Lee, RMT-BC

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Abstract

This manuscript provides a summary of research and information concerning the clinical applications of music therapy with the closed head injury client. It demonstrates a rationale for including music therapy in interdisciplinary rehabilitation. The Rancho Los Amigos Levels of Cognitive Functioning are outlined and therapeutic assessment and treatment procedures are discussed and referenced. Rehabilitation information and procedures are provided in the following areas: awareness and orientation, motor, sensory, cognitive, emotional, behavioral, and social rehabilitation, communication, and family considerations. Furthermore, the author discusses the implications of substance abuse and post-traumatic epilepsy with the head-injured individual.

Music Therapy in the Rehabilitation of Head-Injured Clients

Traumatic Brain Injury (TBI), Closed Head Injury (CHI), brain damage, head trauma...these are all terms that have recently become more prevalent in the literature for medical and rehabilitation professionals. The problem is not new; however, as modern medical technology advances, the survival rate of head trauma patients continues to increase (Barker & Brunk, 1991; Miller, 1993; Misenti, Lucas, & Thompson, 1992).

Due to the increase in the number of head injury survivors, the concept of multimodality treatment in rehabilitation has become more widespread (Claeys, Miller, Dalloul-Rampersad, & Kollar, 1989). This concept in treatment has become strongly supported as a means of thoroughly understanding the specialized needs of head-injured people (Claeys et al., 1989). The emphasis on team treatment has encouraged disciplines to utilize music therapy during their sessions (Claeys et al., 1989; Misenti et al., 1992). As a result, more music therapists are finding themselves employed in the field of neuropsychological rehabilitation (Cohen, 1988). This paper is an attempt on the author's part to provide a review of the literature that is currently available dealing with music therapy and the head-injured client and to suggest novel ways in which music therapy could be used to address some of the hidden problems that may occur in such cases. It is hoped that the information provided will serve as a resource for all people working or living with brain-injured persons.

Terminology and Definition

The terminology of brain injury is itself sometimes confusing. Lucia (1987) defines trauma patients as those who have sustained a closed head injury (CHI) or cerebrovascular accident (CVA), more commonly known as a stroke. Lucia and other clinicians describe brain injury, head trauma, traumatic brain injury, and closed head injury as the brain damage as a result of an accident. In the past when survival of these traumatic accidents was less likely, the term "brain damage" encompassed a large population of individuals with various impairments from a wide range of origins. Now as the sophistication of acute medical care increases, the field has narrowed, leading to new and more specific information and treatment approaches for those individuals who survive a traumatic head injury (Wasco, 1991, Winter).

Rancho Los Amigos Levels

With the increase in rehabilitation programs for the head-injured client, there has arisen a need for a tool that could provide professionals a means for assessing patients' level of cognitive functioning (Gervin, 1991). Before the 1980's such a tool did not exist. Gervin reports that Los Amigos Hospital has developed a behavioral rating scale, "Levels of Cognitive Functioning," (see Appendix) that provides a method for evaluating gains in cognitive skills as the client recovers. Using this scale, an interdisciplinary team can devise an individualized treatment plan that will best meet the rehabilitation needs of the head injury client (Misenti et al., 1992).

Misenti et al. (1992) describe the scale as follows:

> The scale is divided into eight stages that range from deep

> coma—no response to sound, light, or touch—to purposeful and appropriate behavior and cognitive functioning. As individuals improve after brain injury, they move from one level to the next, but often demonstrate characteristics from more than one level at a time. Depending on the extent and type of injury, survivors may remain at any one level for an extended period. (p15)

A fuller description of the stages of the Rancho Los Amigos scale can be located in Claeys et al. (1989). This article describes both the behaviors typically demonstrated at each level and client achievements. Specific music therapy applications on assessment procedures can be found in an outline appearing in Music Therapy Perspectives (1990) by Thompson, Arnold and Murray. Other applications are discussed in a 1989 article by Claeys et al., also appearing in Music Therapy Perspectives.

Awareness and Orientation

Claeys et al. (1989) and Misenti et al. (1992) suggest that in the early stages of rehabilitation (Levels 1 through 3) the music therapist can coordinate with other disciplines to increase client awareness of his or her environment. It is the author's opinion that the primary goal for emerging coma clients should be to increase stimulation and facilitate awareness and orientation. Claeys et al. (1989) offer suggestions for music therapists working to improve awareness and orientation of a comatose individual.

Assessment for localization and tracking responses can be implemented in a creative and enjoyable manner by having clients track musical instruments or locate their sounds. Other cognitive areas can also be

addressed through music therapy (Misenti et al., 1992). A possible strategy for implementing orientation, such as recognition of name and other reality orientation categories, might be through call-and-response songs devised for each individual client according to his or her orientation needs.

Early Motor Rehabilitation

Exercise programs that help to deter possible loss of range of motion following a head injury or stroke should begin as soon after injury as possible because they are most critical in preventing complications (Lucia, 1987). Clinical practice has demonstrated that "range of motion often dramatically increases when exercises are accompanied by music and when the focus of treatment is on music rather than on the exercise" (Claeys et al., 1989, p. 73). Lucia suggests that pairing the singing of familiar songs to the range of motion routines might enhance the learning of the patterns. The tempo and character of the music can be selected to create a rhythmic balance between the client's ability to tense and relax for range of motion exercises. Most importantly, however, music as a changing, yet foundational, stimulus can diminish the monotony of such repetitious exercises.

Sensory Rehabilitation

Claeys et al. (1989) and Misenti et al. (1992) state that in the middle stages of recovery (Levels 4 through 6) music therapy can provide a repertoire of treatment activities to support and enhance the work and expertise of the entire interdisciplinary team. Dalloul-Rampersad (cited in Claeys et al., 1989) suggests that these activities give the client opportunities

to use his or her strengths to address goals ranging from active responsiveness to following simple functional directions.

In their paper, Thompson et al. (1990) outline visual memory, discrimination, matching, perception, and integration. Other visual problems are visual distance, range, peripheral vision, neglect, visual cancellation, scanning, tracking, and prosopagnosia. Thompson et al. also state methods for assessing auditory skills such as auditory memory and discrimination.

Cognitive Rehabilitation

Brain injuries often make learning, memory, and recall of information difficult (Karol & Sparadeo, 1991; Miller, 1993). Permanent long-term memory can be assessed by requesting the client to recall standard, familiar songs (Thompson et al., 1990) or musical finger plays (e.g. "Eency Weency Spider") learned as a child. A possible strategy for addressing working short-term memory, on the other hand, might be to ask the client to recall lyrics of new songs or to repeat a sequence of movements or instrument sounds.

Thompson et al. (1990) describe how response times can be addressed in enjoyable ways by utilizing imitation or direction songs. The flexibility of music allows time for the client to respond. The therapist can then document how much time lapses between the directive and the actual performance of the response. Thompson et al. remind music therapists that the therapist should indicate whether a direction has to be repeated.

Thompson et al. (1990) also elaborate on ways to apply music therapy to concepts in reasoning, such as abstract, inductive, and evaluative thinking. From their suggestions, one may conclude that songs that

incorporate numbers, letters, and counting and spelling concepts could be important tools for improvement in these academic areas. Other academic areas can be addressed through musical games and activities as well.

Motor Rehabilitation

Motor rehabilitation is of utmost importance to the brain-injured person. In persons with brain injury, motor control, the ability to translate thoughts into effective action, is impaired. Balance is also affected (Karol & Sparadeo, 1991). Although motor rehabilitation has generally been considered mainly an area for occupational and physical therapy, Lucia (1987) suggests that the interdisciplinary effects of music-based motor rehabilitation should be considered. Claeys et al. (1989) discuss how music can be used to enhance exercise routines that increase motor control and balance. They further note that music has been found to be especially motivating in the physical and occupational therapy settings and that musical selections provide the structure of rhythm, repetition, and duration necessary for clients to optimize their physical workout and to maximize the results of these exercise routines.

Thompson et al. (1990) examine how music therapy can address motor rehabilitation areas in a variety of ways. Bilateral symmetrical, asymmetrical, and reciprocal movement patterns, right and left discrimination, eye-hand coordination, and palmar, hook, lateral, cylindrical, and spherical grasps can be assessed and addressed with music therapy techniques.

Emotional, Behavioral and Social Rehabilitation

Although clients with head injury suffer considerable deficits in cognitive and motor areas, emotional and behavior disorders are among the most formidable consequences of head injury (Barker & Brunk, 1991; Misenti et al., 1992; New Medico Associates, 1990b). Helping the head-injured individual to accept the trauma and adjust to new circumstances is a challenge to all professionals working in the field of rehabilitation. Self-esteem and body-image are important concerns for all humans.

Music therapy provides wonderful opportunities to increase appropriate emotional and social skills. Musical games, activities, and songs provide ample opportunities to improve social interaction and socialization. Thompson et al. (1990) note that skills such as affect, including facial expressions and spontaneous smiling, and eye contact can be assessed in the earliest of the middle stages of rehabilitation. Additionally, the music therapist should decide if the client will require individual treatment to increase his or her social skills or, if not, what size group he or she can tolerate.

Interaction and participation in group or individual activities may require a maximum amount of prompting or possibly some physical assistance. Prompting may be verbal, physical or visual. As the client interacts more, prompting may be decreased to a minimal amount, requiring only some physical assistance (Thompson et al., 1990). Auditory cues can be incorporated into the musical framework of song lyrics (Gervin, 1991). The

ultimate goal is for the client to participate without any assistance or prompting from the therapist.

During participation in music therapy sessions a variety of behaviors may occur. Clients may be cooperative and friendly or argumentative and inappropriate. They may also experience hallucinations or become physically aggressive (Miller, 1993; Misenti et al., 1992; Thompson et al., 1990). Changes in emotion may occur rapidly (Misenti et al., 1992). Therapists who help clients eliminate inappropriate behavior teach "pro-social" alternatives and self-control (New Medico Associates, 1990b; Thompson et al., 1990).

Recent literature has suggested that improper management of behavioral conditions, such as aggression, agitation, and loss of self-control, can have long-term effects on a head-injured individual's behavior. Professionals have realized that behavioral problems make treatment difficult and that other impairments are only compounded when challenging behavior is evident. In many hospitals and rehabilitation centers throughout the country new strategies are being developed to manage aggressive clients. Professionals are implementing behavior management techniques, as opposed to drugs or physical restraints, during the early stages of the rehabilitation process (Misenti et al., 1992; Papas, 1992). Those employing these behavior modification techniques hope that the head-injured client will gain more behavioral self-control, and, that the outcome of treatment will improve as well. Chemical restraints are avoided whenever possible because medications often impair cognition and make cognitive improvement more difficult to recognize (Papas, 1993).

Michael Cataldo, director of the department of psychology at the Kennedy-Krieger Institute, suggests that rehabilitation professionals help the client to adapt to his or her new situation as soon as possible. He stresses that therapists should be sensitive to a client's coping techniques and, if need be, teach the individual alternative ways to communicate frustration at his or her condition and environment (Papas, 1993). Misenti et al. (1992) suggest that professionals create a calm, consistent, and caring environment for an agitated person as early in the rehabilitation process as possible. Additionally, Misenti et al. state that family members should not withdraw from a person with these behavioral and emotional problems; instead, it is essential that they, too, provide support and understanding.

New Medico Associates (1990b) suggest that, using input from the client's family, an interdisciplinary team of therapists and behavior specialists can formulate a specifically tailored, detailed treatment program that addresses the individual's unique problems. They further state that persons with head injuries frequently need to learn how to control their behavior and improve their social skills before they can advance in the rehabilitation program or return to everyday life.

In the late stages of recovery (Levels 7 and 8), song writing, done both in group settings and with individuals, helps to initiate self-expression, pride, and a sense of accomplishment in the client (Claeys et al., 1989). It has also been found that there is a correlation between music/imagery techniques and more positive attitudes, moods, and eagerness to receive assistance from others among brain-injured individuals (Goldberg, Hoss, & Chesna, 1988).

Whatever the setting--group or individual therapy--physical, cognitive, and communication goals should be addressed during the later stages of rehabilitation. At this point, social and community reintegration goals are also important (Claeys et al., 1989); training for re-entry into the community is the last hurdle for a person with a head injury as he progresses toward wholeness as a contributing member of society (New Medico Associates, 1990b). Music therapy group sessions are especially helpful in building relationships and a sense of community (Claeys et al., 1989).

Communication

An Educational Manual (1985) distributed by the National Head Injury Foundation explains that traumatic brain injury is unlike a stroke in that the damage is not localized to a specific area of the brain. While previous research has allowed for the prediction of what sorts of impairments would arise from a localized injury, such as a stroke, the more pervasive nature of head trauma does not allow specialists to foresee specific impairments that could arise. Consequently, rehabilitation professionals do not focus on the area of injury, instead, they must allow the brain to reorganize and restructure itself for successful recovery.

Since features of both speech and music have been noted in both the left and right hemispheres of the brain (Lucia, 1987), speech therapy goals can be addressed through music therapy. It appears in clinical practice that efforts to produce speech are shown to be greatly improved "when paired with tonal and rhythmic stimuli" (Claeys et al., 1989, p. 73). Lucia suggests

that clients with injury "to the left frontal lobe (Broca's Area) or with bilateral damage leaving the right temporal lobe relatively intact" (p. 36) receive the most benefit from music therapy vocal skills training.

There are many communication disorders associated with the head-injured client. Thompson et al. (1990) provide an excellent review of some of the disorders involved with brain injury including aphasia, agnosia, aphonia, apraxia, agraphia, dysarthria, dysphagia, echolalia, and perseveration. They discuss how many of these areas of communication can be addressed through music therapy activities.

Vocal music therapy can aid the rehabilitation of aphasic clients in a number of ways. Singing can provide the rhythmic structure necessary for clients with receptive and expressive aphasia to express themselves (Claeys et al., 1989). Lucia (1987) suggests that word retrieval can be addressed through singing activities and rhythmic chanting exercises. In addition, it has been found that some clients with lesions in the left hemisphere of the brain will respond more accurately to directives and questions when they are sung rather than spoken (Claeys et al., 1989). For some clients with aphasia, Lucia found that mnemonic song techniques are particularly helpful. However, these techniques seemed to overstimulate sensory input for clients with other communication disorders.

Lucia (1987) and Cohen (1988) note how Melodic Intonation Therapy has also been a successful means of addressing the needs of aphasic clients, particularly those with damage to the Broca's Area of the left cerebral hemisphere. Treatment begins with unison speech with melodic patterns.

followed by imitative speech with the melodic patterns, and concluding with imitative speech without the melodic structure.

Musical games and activities with a repetitive focus on the pairing of objects, visual and color concepts, and facial expressions with appropriate situational uses, identification or verbal descriptions provide a means of assessing the many different forms of agnosia. Music therapy can also address apraxia by encouraging imitation of specific embouchure formations and blowing . Use of songs incorporating short syllables and the use of wind instruments both incorporate specific muscular training (Thompson et al., 1990). In addition, such activities as rhythmic chanting and singing can provide the necessary rhythmic foundation for increasing the rate and fluency of speech (Lucia, 1987).

Music therapy provides ready assessment procedures and treatment activities for a variety of other communication disorders. Thompson et al. (1990) outline assessment procedures for aphonia, perseveration, echolalia, paralysis of the muscles involved in creating speech, verbal repetition of auditory information, single syllable responses, phonation, resonance, and ability to match vocal pitches. Articulation, respiration, and prosody can be addressed as well. Lucia (1987) elaborates that singing in rhythm may naturally facilitate desired breathing patterns, increase breath capacities, and decrease articulation errors caused by inappropriate rhythm or rate of speech. She notes that this can also be incorporated into specific motor exercise programs, possibly encouraging clients to exercise in rhythm as well.

Family Considerations

The impact of head injury on the family is dramatic. Immediately, they are faced with making decisions, making adjustments, and dealing with a tremendous amount of stress (Barker & Brunk, 1991; Miller, 1993; Misenti et al., 1992). However, recent head injury literature has placed an emphasis on the need for involvement of family members in the rehabilitation process. Cooperation of the family can determine success or failure of the program as a whole (Barker & Brunk, 1991; Miller, 1993; Misenti et al., 1992). It would seem that teamwork among family members and treatment professionals is crucial for the success of the rehabilitation process. It is the author's opinion that therapists, doctors, nurses, and family members should be in constant communication with each other, for discussion of progress, needs, and realistic expectations for recovery are essential. Intervention should be coordinated toward a common goal...a rehabilitation program.

As the family unit becomes part of the rehabilitation process, there are two basic rehabilitation goals for them in the earlier stages of recovery: one, to develop trust with the medical professionals and two, to become actively involved in the care of their injured loved one. Family members may be encouraged to actively participate in therapy sessions whenever possible (Barker & Brunk, 1991; Miller, 1993). Professionals realize that family members play a major part in the head-injured individual's rehabilitation. Providing pretraumatic information (such as favorite activities and foods, preinjury behavior, and personality), participating in team treatment decisions and in the interdisciplinary team's attempts to promote

awareness and orientation are just a few of the important roles family members can take. These interactions are especially helpful to the professionals because injured clients will respond much more readily to their loved ones than to medical professionals or therapists (Misenti et al., 1992). In addition, family members might find their involvement therapeutic for themselves (Barker & Brunk, 1991; Miller, 1993).

As recovery advances, music therapists can address the functional skills of head-injured individuals, encourage social interaction between the client and families and provide an emotional outlet for the client and families involved in rehabilitation programs (Barker & Brunk, 1991). Music therapy can facilitate communication, interaction, and encouragement among the head-injured individuals and their families through group music therapy activities (Kollar, 1987).

In the middle stages of recovery medical staff provide information, support, and teaching to the families as they prepare them for home visits. Claeys et al. (1989) offer suggestions of music therapy activities that can be employed at home, activities that provide structure for the head-injured individual while in the supportive environment of their family group.

It is important to remember that the family members share an investment in the head-injured client's treatment programs and outcome . They must understand their role in the client's recovery before the client leaves the hospital or rehabilitation center (Miller, 1993). In the late stages of recovery, rehabilitation professionals work with the family to prepare them for the discharge of their injured family member and to provide emotional

support (Barker & Brunk, 1991; Miller, 1993). The family's ability to accept and plan for the limitations of their injured loved one is critical for the successful discharge of a head trauma client (Miller, 1993).

Substance Abuse

Recently, researchers have discovered a connection between traumatic brain injuries and substance abuse (Sparadeo & Gill, 1989; Sparadeo, Strauss & Barth, 1990). Sparadeo and Gill found that the majority of head injuries are directly related to the use of chemicals. Over half of all people sustaining head injuries had been drinking (Sparadeo & Gill, 1989). Indeed, alcohol is the most common drug found in the bloodstream of head trauma victims (Sparadeo et al., 1990). Research has informed us that those individuals that sustain a head injury with blood alcohol levels of .10 have a more difficult road to recovery (Solomon & Sparadeo, 1992; Sparadeo & Gill, 1989). They also have lower levels of social and cognitive achievement upon discharge (Sparadeo & Gill, 1989).

Sparadeo and Gill (1989) found that many survivors of these head injuries return to use of the chemical substances either during or after the rehabilitation programs. However, this is controversial. Research by Kreutzer, Doherty, Harris & Zasler (1990) found that head trauma clients were 37% more likely to abstain from chemical substances after their injury than before their injury.

Considering the connection between brain injury and substance abuse, many head injury rehabilitation programs are offering a dual diagnostic program—combining treatment for substance abuse with the total

rehabilitation process (Misenti et al., 1992). Music therapists should consider this connection when working with a head-injured individual. Investigation into the head trauma accident may be helpful in determining whether substance abuse programming should be included in the therapeutic process offered by the interdisciplinary team.

New Medico Associates, Inc. (1990a) explain that brain injury victims who are also substance abusers need specialized treatment. Alcohol and drugs can increase neurological damage, increase seizure tendencies, and decrease physical and cognitive functioning (New Medico Associates, 1990a; Solomon & Sparadeo, 1992). Not only does substance abuse amplify neurologic damage, but neurologic damage in turn, amplifies the effects of these stimulants or depressants (New Medico Associates, 1990b).

New Medico Neurologic Rehabilitation Centers use a behavioral approach to treatment that appears to be a productive means of working with a dually-diagnosed client (New Medico Associates, 1990a, 1990b). Short-term objectives in impulse control, judgment, and problem-solving are addressed with long-term goals in mind. Behavior therapists work with the individual to analyze their behaviors, to discover the thoughts and feelings that spark them to use alcohol or drugs (New Medico Associates, 1990a). In the author's opinion, music therapists can contribute to this aspect of the rehabilitation process very effectively. Coping techniques are important areas of discussion. Song writing offers opportunities for a dually-diagnosed client to express his or her frustration about the injury and the consequent deficit areas. Lyric discussions may provide suggestions as to alternative responses

and a means of coping with frustrations and problems that trigger substance abuse.

Post-Traumatic Epilepsy

Although head-injured individuals who also have a history of substance abuse are more susceptible to seizures, post-traumatic epilepsy develops in greater than five percent of head injury individuals (An Educational Manual, 1985). Post-traumatic epilepsy usually develops within two years of the head injury; sometimes it develops much later (Carson, Butcher, & Coleman, 1988; Collins, 1991; Misenti et al., 1992; Wasco, 1991, Winter). Epilepsy is one of the most common of the delayed complications of a brain injury (Wasco, 1991, Winter). Generally, the longer the period between the injury and the first seizure, the more likely the seizures are to continue (Carson et al., 1988). Epilepsy intensifies the behavioral, physical, and cognitive areas already impaired by a head injury. Treating and living with this is challenging to everyone—caregivers as well as head-injured clients. The unpredictability of seizures leaves its victim insecure in community and social settings. The loss of control and resultant safety, psychological, and interpersonal issues are difficult to handle (Collins, 1991). As a result, it would seem music therapists, along with the entire interdisciplinary group of professionals, should address the coping interventions for the epileptic client. In addition, education and support from the professional community are essential for understanding the needs of the neurologically impaired client (Collins, 1991).

Summary

Clinical practice by Lucia (1987) has confirmed that head trauma patients do respond and make progress when presented with rehabilitation programs that are music based. Communication and motor skills increase and self-concept and other emotional and psychological needs are also supported. In addition, as Claeys et al. (1989) state, music therapy activities are designed to be fulfilling and rewarding regardless of the level of the client. As reeducation and rehabilitation progress, so does music therapy. The activities are based on the individual needs of the head-injured client. All-in-all, music therapy provides opportunities for positive, enjoyable experiences that aid and encourage in the healing and rehabilitation process.

Although music therapy has been shown to have a viable role in neuropsychological rehabilitation, its function and application often overlap with speech therapy, physical therapy or occupational therapy (Lucia, 1987; Misenti et al., 1992). It is often difficult to get insurance companies to pay for music therapy if it is viewed as a duplication of services. These reimbursement issues are a complication in any new therapeutic field that does not have research-based support, including music therapy. This paper provides a summary of the research and information concerning the clinical applications of music therapy with the closed head injury client. It is an attempt to demonstrate a rationale for music therapy in interdisciplinary rehabilitation. Hopefully, interdisciplinary teams will become more aggressive in including music therapists as a part of the team and the team as a whole

will work with the available funding to provide the best possible approach to rehabilitation for the head-injured client.

To facilitate the implementation of music therapy in such teams more clinical research is required to substantiate and validate utility of music therapy on its own or when combined with other therapies. Until research demonstrates that music therapists provide a unique therapy and are an integral part of the rehabilitation process, music therapists will be regarded as superfluous and an unnecessary medical expense.

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Appendix

Rancho Los Amigos Scale of Cognitive Functioning

Below is a general summary of the Rancho Los Amigos levels as described in the appendix of the 1989 article by Claeys et al.

Level 1

The client is completely unresponsive and does not acknowledge any stimuli. This is the deepest stage of coma.

Level 2

The clients' responses to stimuli are inconsistent, nonpurposeful and may be delayed.

Level 3

The client is more aware and responds purposefully to stimuli. However, responses continue to be inconsistent and delayed.

Level 4

The client is more active and able to express him or herself both verbally and physically; however, the client may lack short- and long-term memory and demonstrate confusion and nonpurposeful behavior. He or she has an extremely short attention span.

Level 5

The client is highly distracted and requires continual redirection to perform simple commands or to learn new tasks. Long-term memory begins to return but short-term memory is unreliable.

Level 6

The client is able to perform self-help skills with minimal assistance. Memory and attention span have improved and there is understanding of the individual rehabilitation process.

Level 7

The client can perform daily routine without difficulty. However, problem-solving and judgment skills remain impaired.

Level 8

The client is able to learn new material and to function independently. He or she is able to remember and use his or her experiences and demonstrates generalizations for learning new tasks. Judgments made during emergency or crisis situations may be unrealistic and unreliable.

Author Notes

I gratefully acknowledge and commend the publishers of Headlines magazine for their free subscriptions, journal reprints and helpful telephone operators. Their cooperation and information have been invaluable in preparing this manuscript.

I wish to thank my mentor, Marcia Humpal, MEd, RMT-BC and Linda and Wade Lee for their support and guidance.

SLIPPERY ROCK UNIVERSITY

MEMORANDUM

TO: Clinical Training Committee, NAMT

FROM: Sue Shuttleworth, RMT-BC
Coordinator of Music Therapy

Sue Shuttleworth

RE: Parma Developmental Center Internship Proposal

DATE: January 18, 1995

Representing an academic institution, Slippery Rock University, I am pleased to endorse the proposed Music Therapy Clinical Training Program at Parma Developmental Center in Cleveland, Ohio. I have reviewed the internship application from Lissa Lee, RMT-BC and support the addition of this new training program, beginning in the 1995-96 school year.

Many of the music therapy students from SRU desire a local internship placement within the Pittsburgh or Cleveland areas. I am also finding an increase in students desiring an internship with school-aged children. This new internship would address both issues for our students.

Ms. Lee's proposal offers varied programming (including music mainstreaming), as well as the provision for interacting regularly with additional music therapists within the Cuyahoga County Board of Mental Retardation/Developmental Disabilities system. She has described a thorough training experience with excellent learning opportunities. I recommend the proposal for your approval.

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